

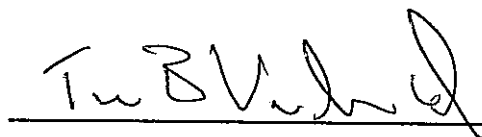
**Report of Results: MVA5394**

**Analysis of Settled Dust  
Resources Building**

**Prepared for:**

**State of California  
Dept of General Services  
Seismic & Special Programs  
707 West 3rd St.  
West Sacramento, CA 95605**

**Respectfully Submitted by:**



**Tim B. Vander Wood, Ph.D.  
Executive Director**

**MVA Scientific Consultants  
3300 Breckinridge Boulevard  
Suite 400  
Duluth, GA 30096**

**29 August 2007**



**Report of Results: MVA5394****Analysis of Settled Dust - Resources Building****Introduction**

On 20 July 2007, we received five settled dust samples from Clark Sief Clark, reportedly collected from the Resources Building, 1416 9<sup>th</sup> Street, Sacramento, California. We were asked to determine the asbestos levels in the dust and possible sources for the asbestos. Upon receipt, the samples were assigned MVA Scientific Consultants laboratory identification numbers as follows:

<u>Sample ID</u>	<u>Sample Description</u>	<u>MVA Number</u>
11VA	5 <sup>th</sup> floor, Men's bathroom pipe chase floor	S0842
12VA	7 <sup>th</sup> floor, Men's bathroom pipe chase top of green box	S0843
13VA	9 <sup>th</sup> floor, Men's bathroom pipe chase top of pipe	S0844
14VA	11 <sup>th</sup> floor, Men's bathroom pipe chase floor	S0845
15VA	13 <sup>th</sup> floor, Men's bathroom pipe chase floor	S0846

All analyses were carried out in our laboratory during the period 20 July through 27 August 2007.

**Methods**

The samples were analyzed according to ASTM Method D5755-03 using either a Philips model EM420 or a Philips model CM120 transmission electron microscope (TEM), equipped with an Oxford INCA energy dispersive x-ray spectrometer (EDS). Additional analyses for dust constituents that may serve as source indicators were also conducted by TEM/EDS.

**Results and Discussion**

The results of analysis for these samples are presented in Table 1. The Appendix contains a summary of the analytical results, the laboratory count sheets, and images and EDS spectra of typical asbestos fibers found in these samples. Also contained in the appendix are images and spectra showing vermiculite associated with chrysotile fibers and other asbestiform amphibole minerals typical of those known as "Libby amphibole" and observed as contaminants in vermiculite from the Libby, Montana vermiculite mine operated by W.R. Grace.



## Conclusions

Dust analyzed in this study contains elevated levels of chrysotile asbestos. Portions of the dust are consistent with derivation from a chrysotile/vermiculite bearing fireproofing. Asbestiform amphibole consistent with "Libby amphibole" was also found, indicating that the vermiculite in this sample originated at least in part at W.R. Grace's Libby vermiculite mine.

**Table 1. Asbestos Concentration in Settled Dust Samples**

Sample ID	MVA Number	Asbestos Str/cm <sup>2</sup>
11VA	S0842	27,213,333
12VA	S0843	28,608,889
13VA	S0844	116,296,296
14VA	S0845	123,274,074
15VA	S0846	3,488,889





Requested TAT (Circle One)	Same Day	One Day (24hr)	Normal (48hr)
Analysis Type (Circle One)	Air	Surface	Bulk Water

Requested TAT (Circle One)	Same Day	One Day (24hr)	Normal (48hr)
Analysis Type (Circle One)	Air	Surface	Bulk Water

Case 01-01139-AMC	Dpc 17074-5	Filed 10/16/07	Page 4 of 29
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Clark Self Clark: 21732 Devonshire Street, 2nd Floor, Chatsworth, CA 91311, Ph (818) 727-2553, Fax (818) 727-2556  
www.csceng.com

## APPENDIX

**ASTM D5755 Results****MVA 5394**

By: W.Hill

Client project number:

Str/cm = No Str. X CFA X Total Vol.

Grid Op. X GO Area X Vol Filt X Area Sampled

MVA #: S0842 Client #: 11.VA

Str. #	CFA	#GO	Area GO	Vol Filt ml	Total Vol.	Area Samp.
78	1256	4	0.009	0.1	100	100

Anal. Sens = 348888.889 Str/CM2 LOD =3\* Anal. Sens = 1046666.667

Total = 27213333.333 Str/CM2

MVA #: S0843 Client #: 12.VA

Str. #	CFA	#GO	Area GO	Vol Filt ml	Total Vol.	Area Samp.
82	1256	4	0.009	0.1	100	100

Anal. Sens = 348888.889 Str/CM2 LOD =3\* Anal. Sens = 1046666.667

Total = 28608888.889 Str/CM2

MVA #: S0844 Client #: 13.VA

Str. #	CFA	#GO	Area GO	Vol Filt ml	Total Vol.	Area Samp.
50	1256	6	0.009	0.01	100	100

Anal. Sens = 2325925.926 Str/CM2 LOD =3\* Anal. Sens = 6977777.778

Total = 116296296.296 Str/CM2

MVA #: S0845 Client #: 14.VA

Str. #	CFA	#GO	Area GO	Vol Filt ml	Total Vol.	Area Samp.
53	1256	6	0.009	0.01	100	100

Anal. Sens = 2325925.926 Str/CM2 LOD =3\* Anal. Sens = 6977777.778

Total = 123274074.074 Str/CM2

MVA #: S0846 Client #: 15.VA

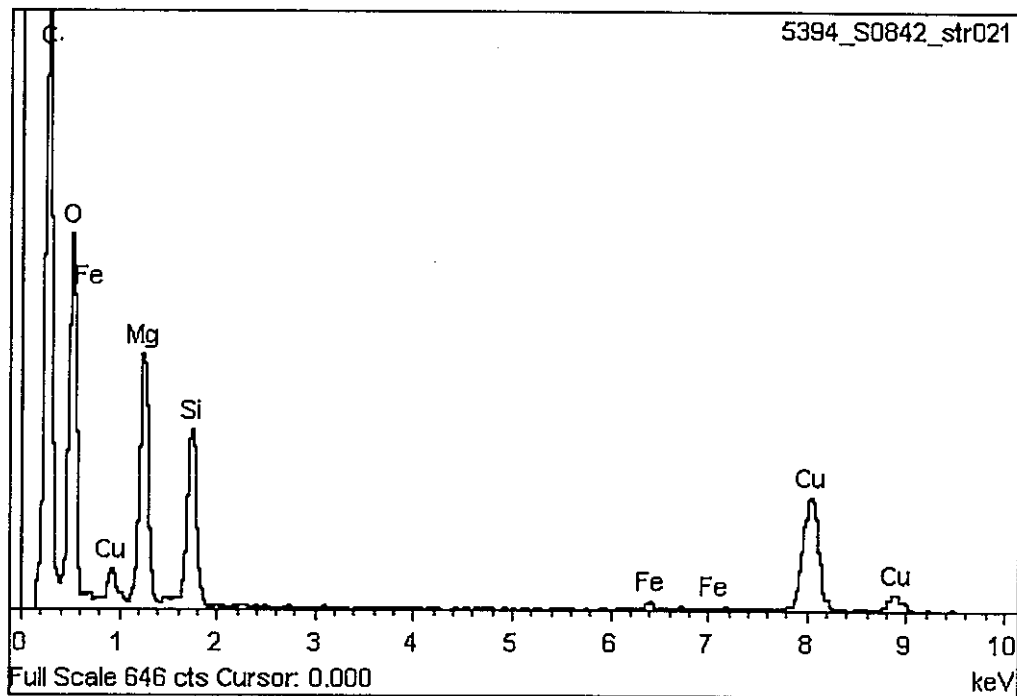
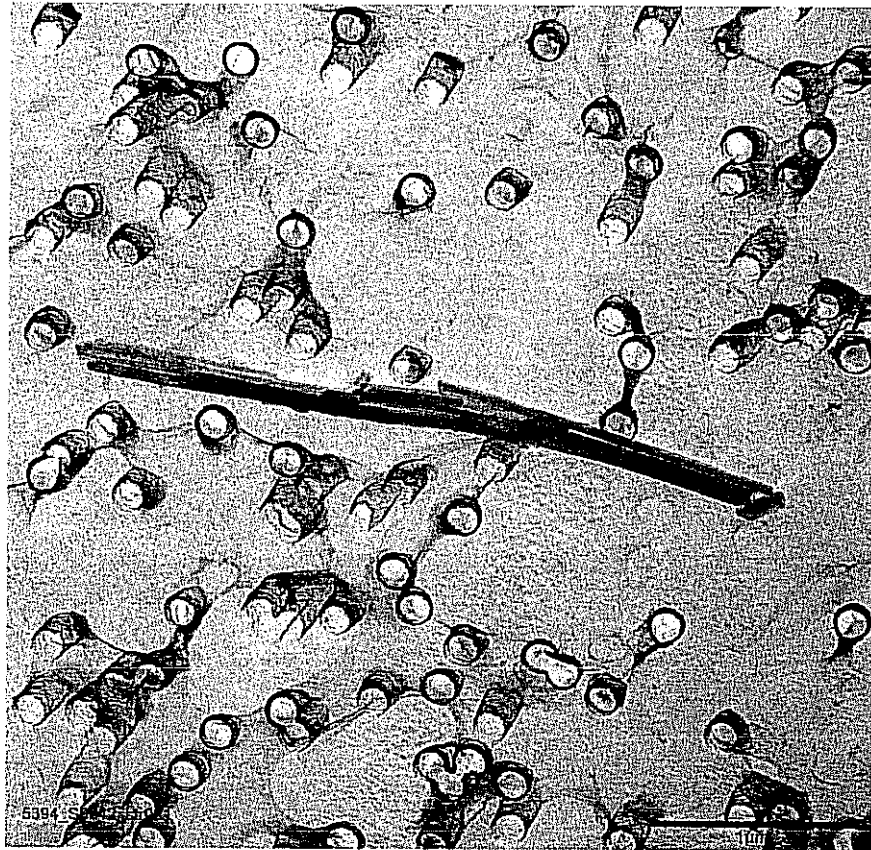
Str. #	CFA	#GO	Area GO	Vol Filt ml	Total Vol.	Area Samp.
25	1256	10	0.009	0.1	100	100

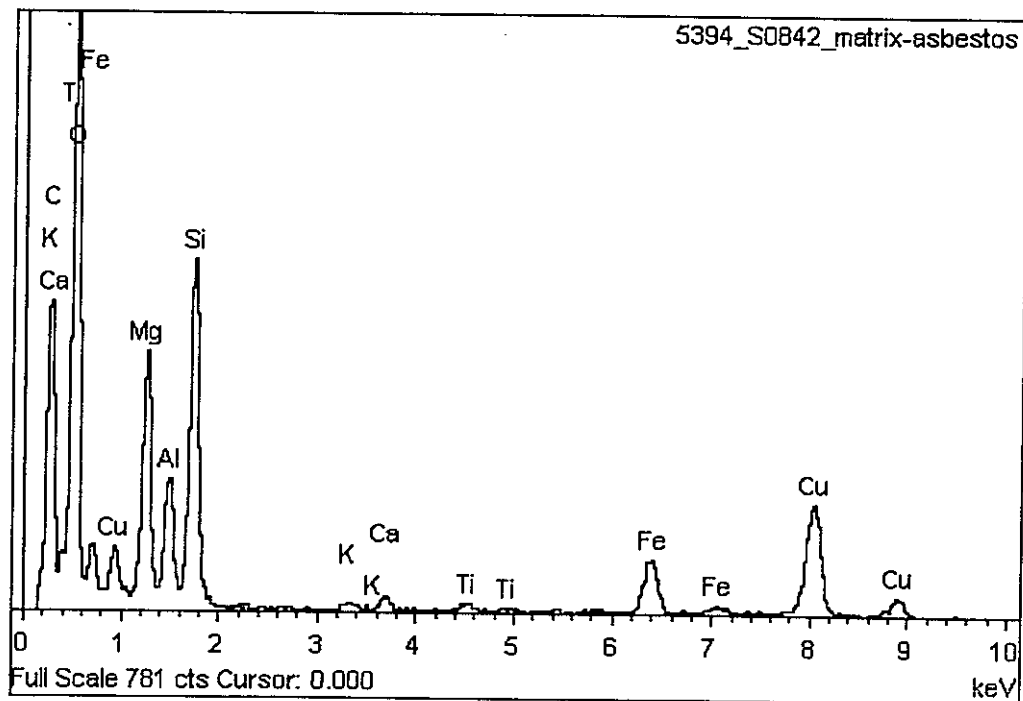
Anal. Sens = 139555.556 Str/CM2 LOD =3\* Anal. Sens = 418666.667

Total = 3488888.889 Str/CM2

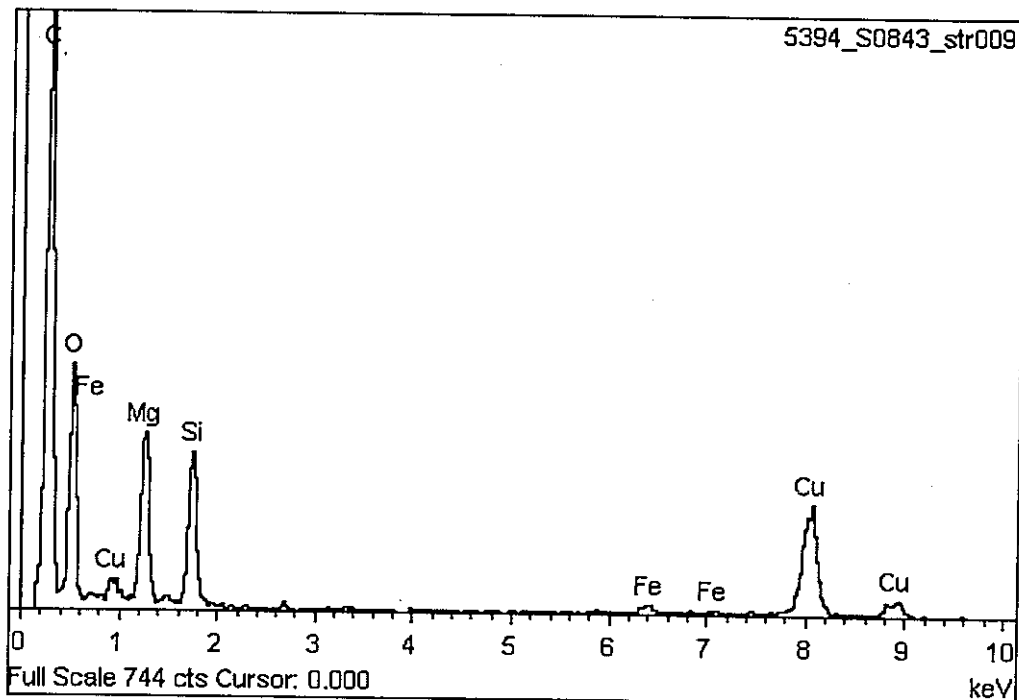
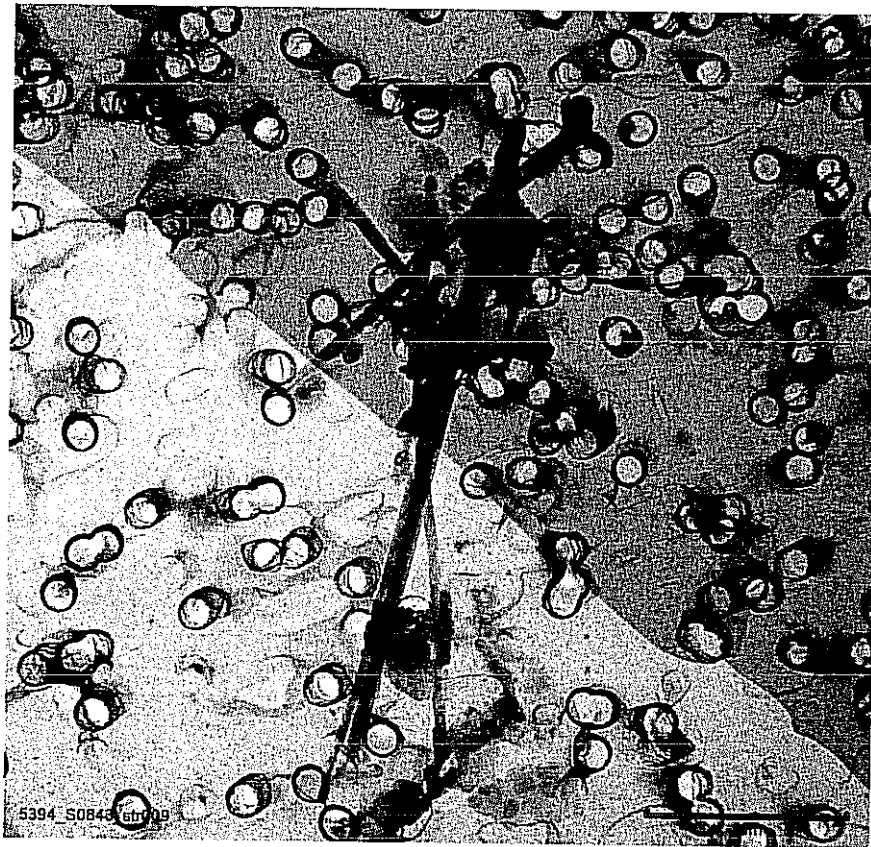
\* According to ASTM D6620

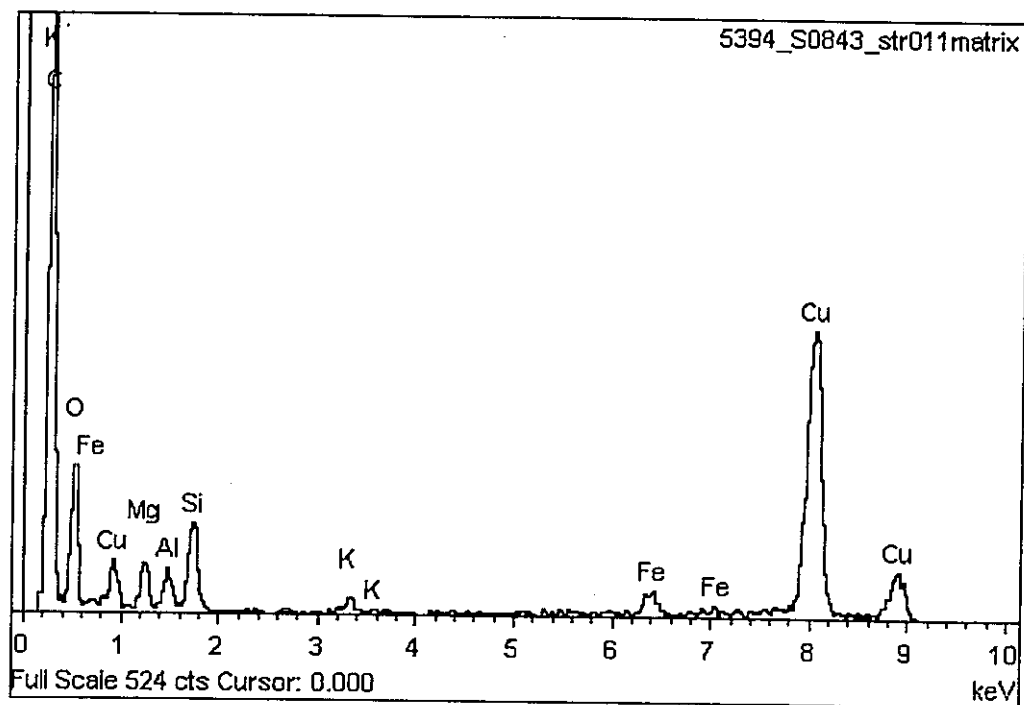


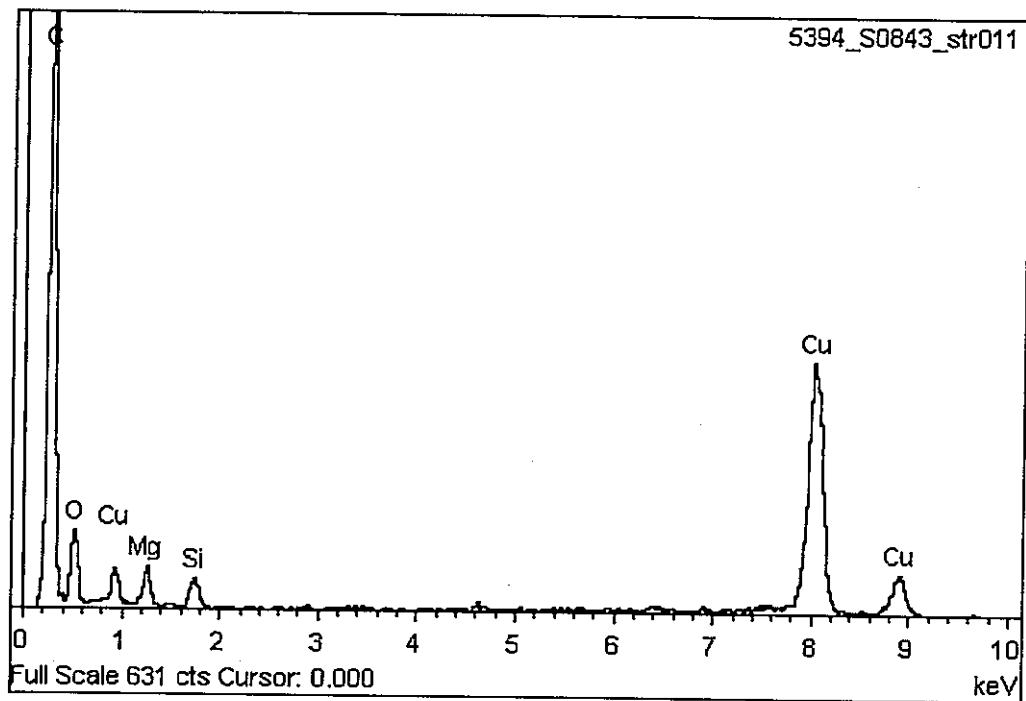


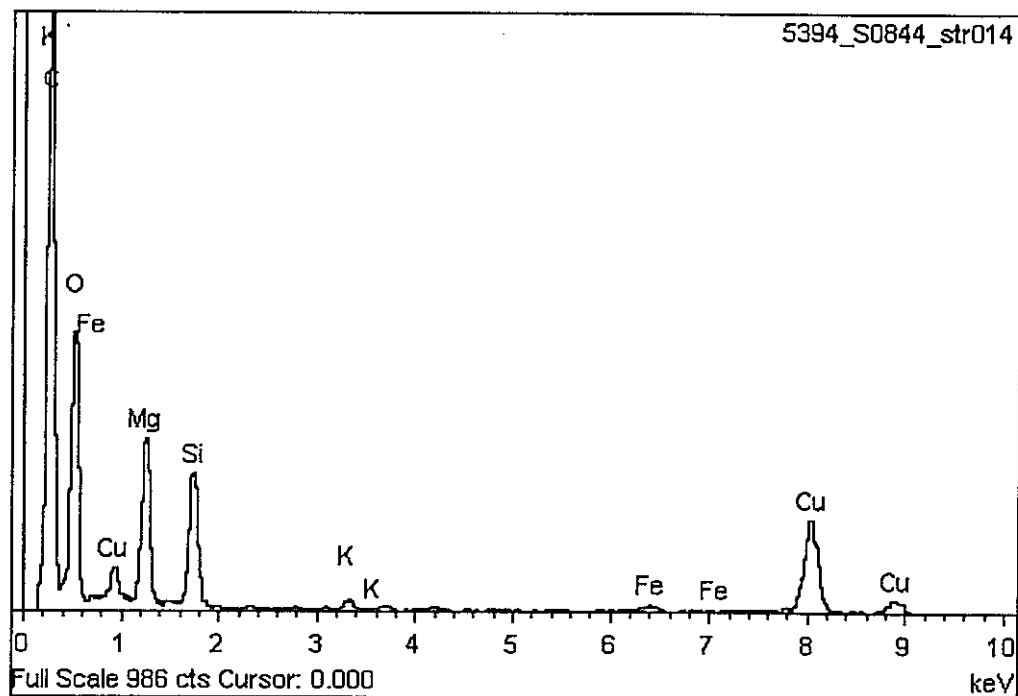
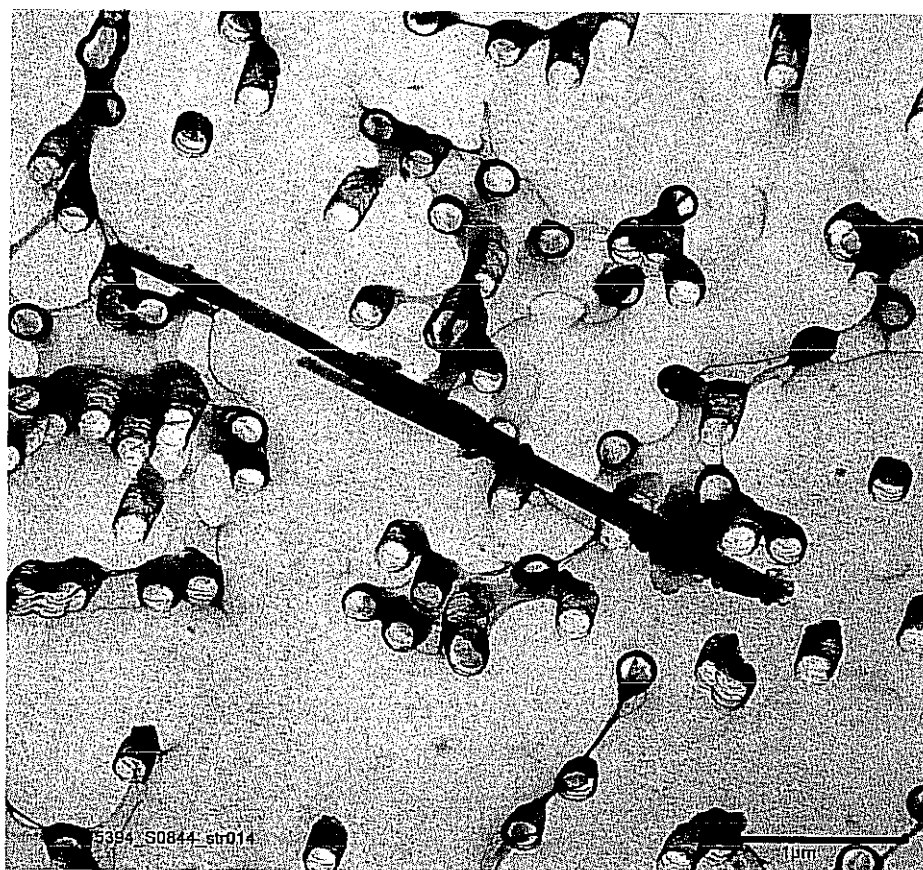


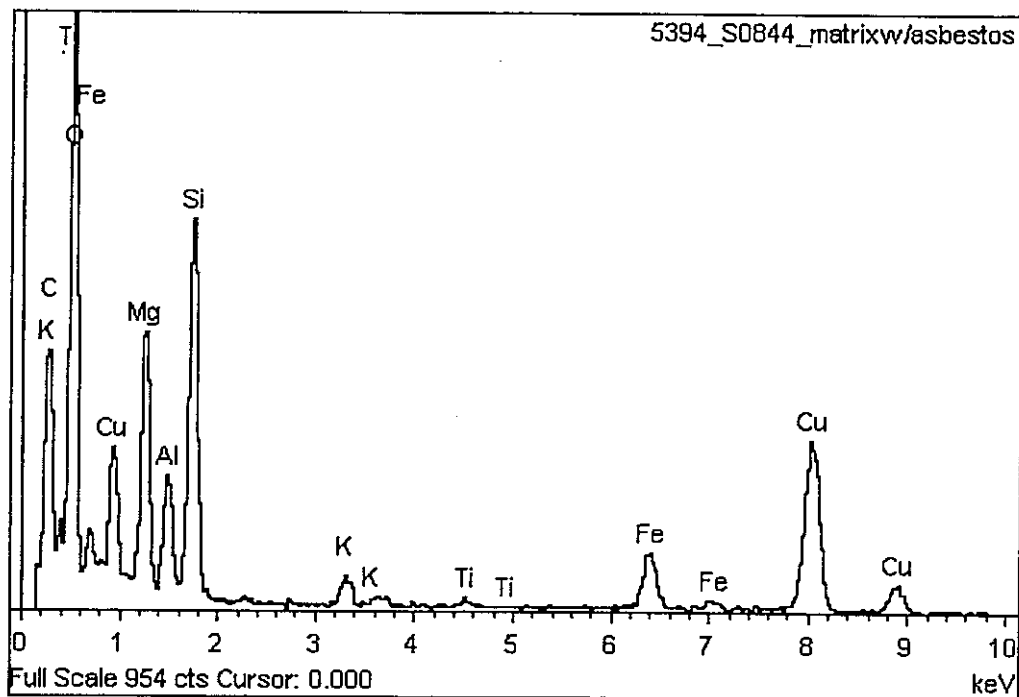
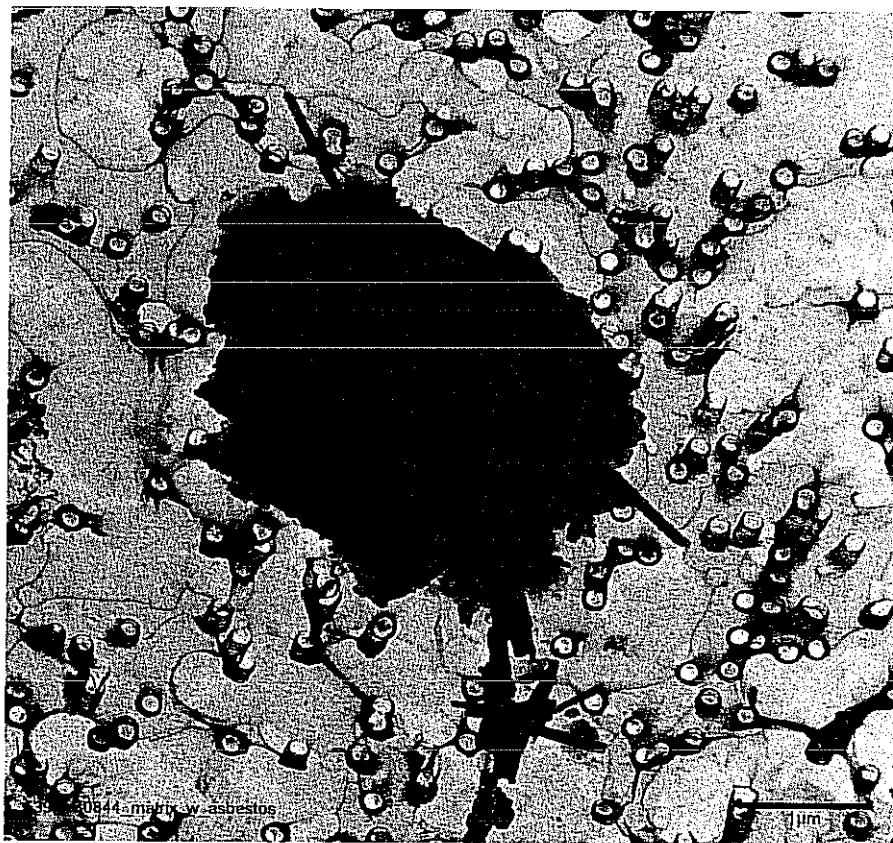


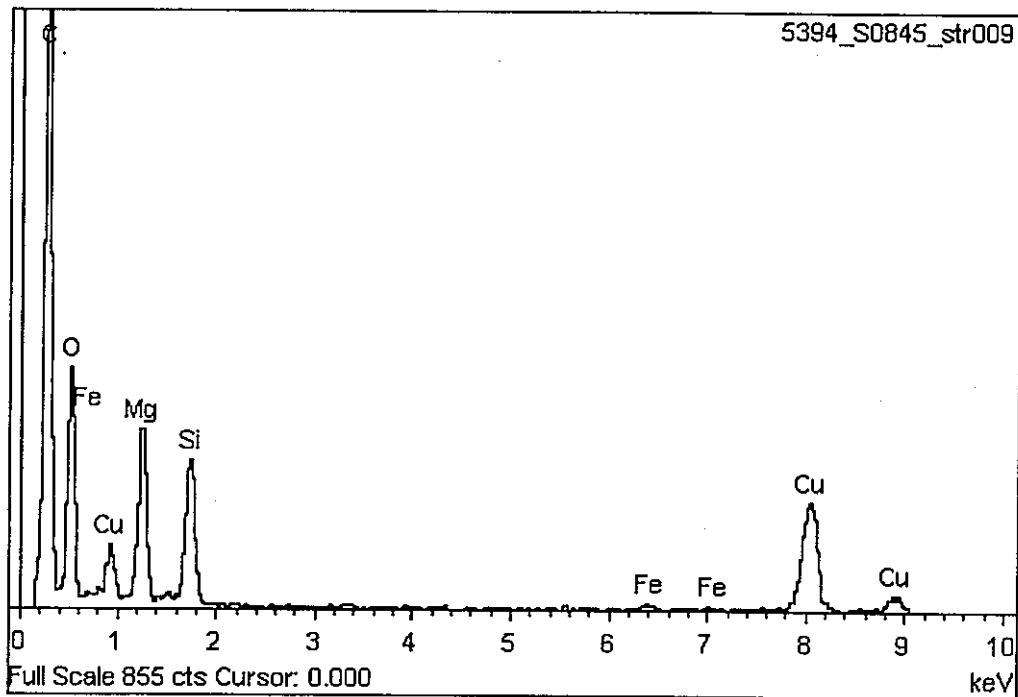
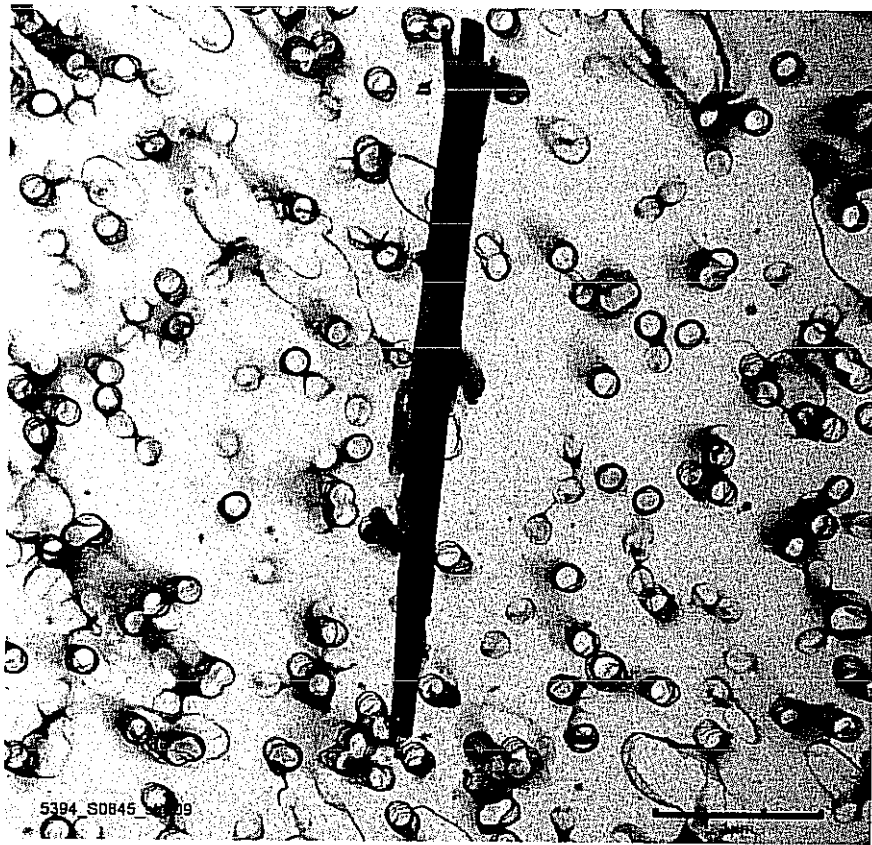


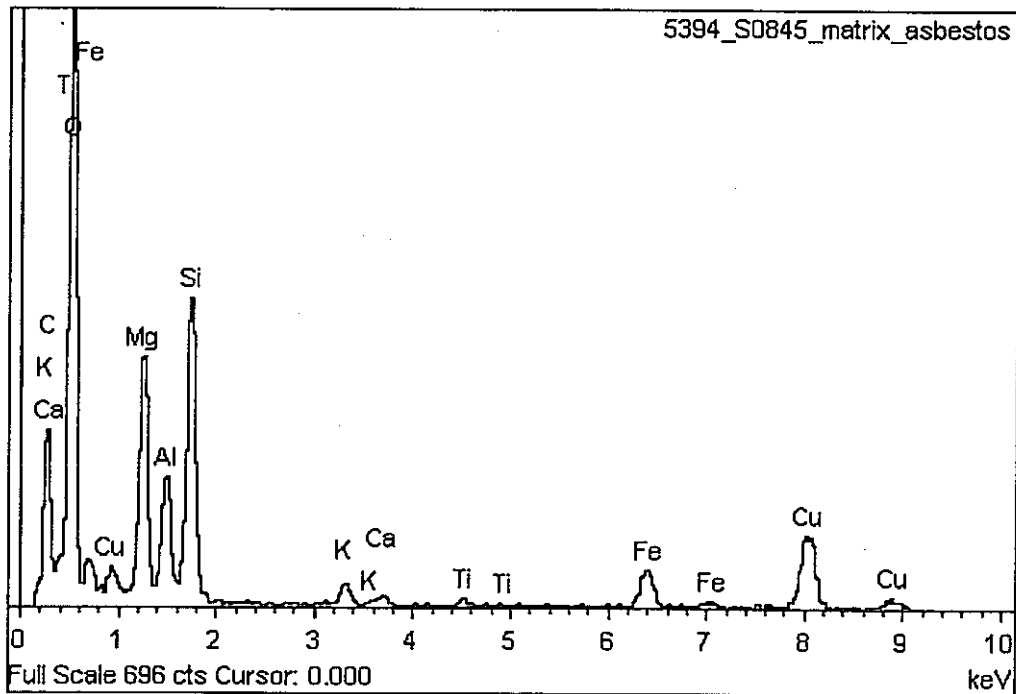
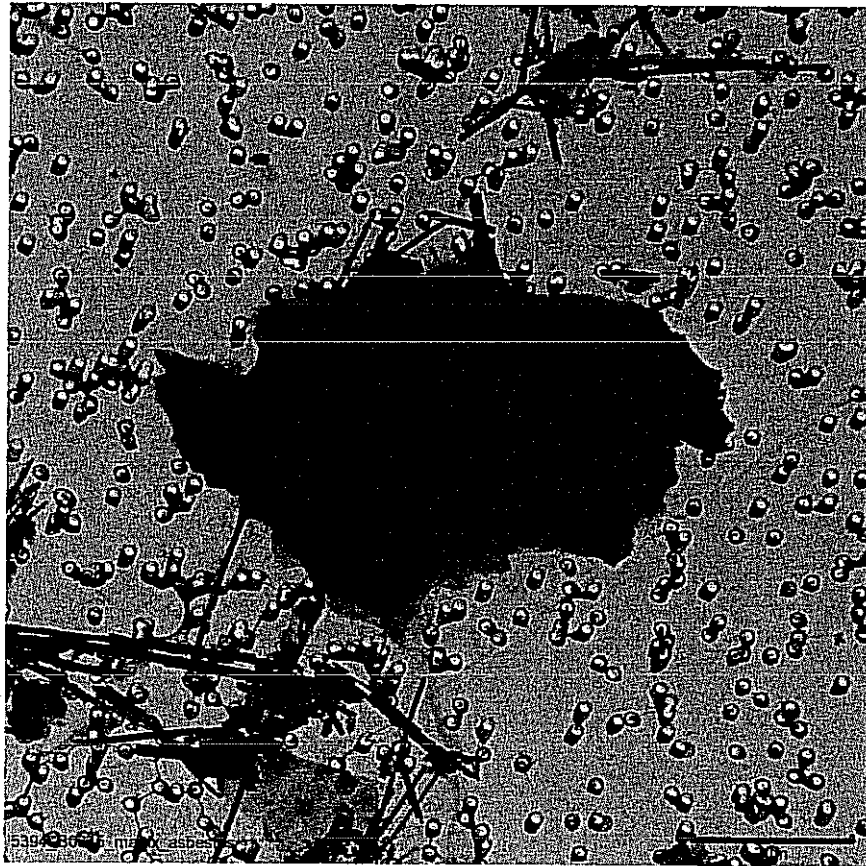


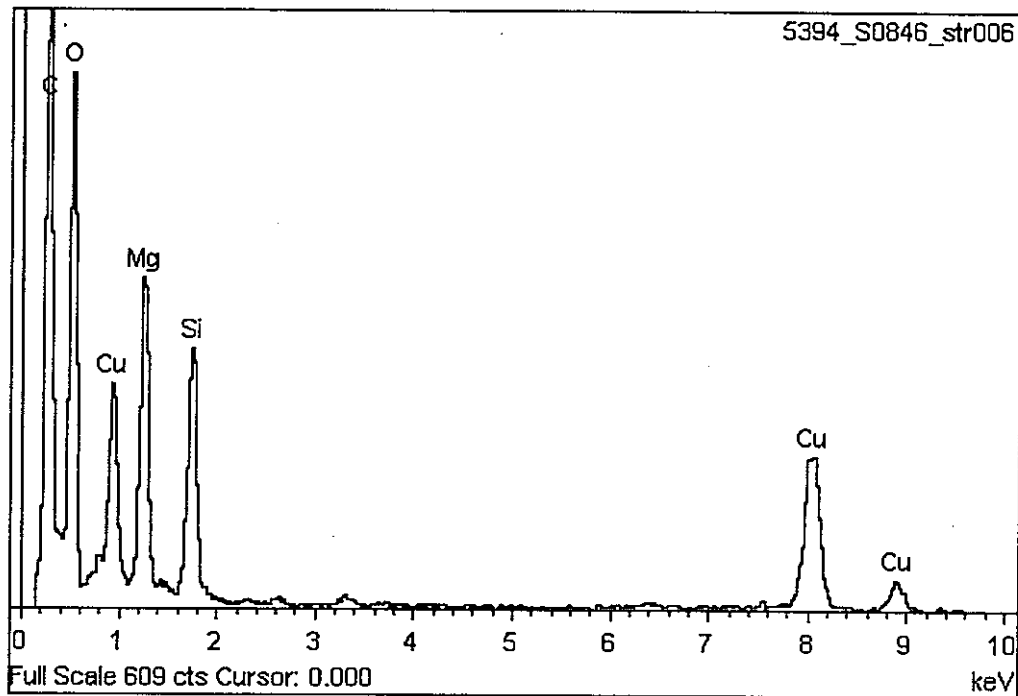
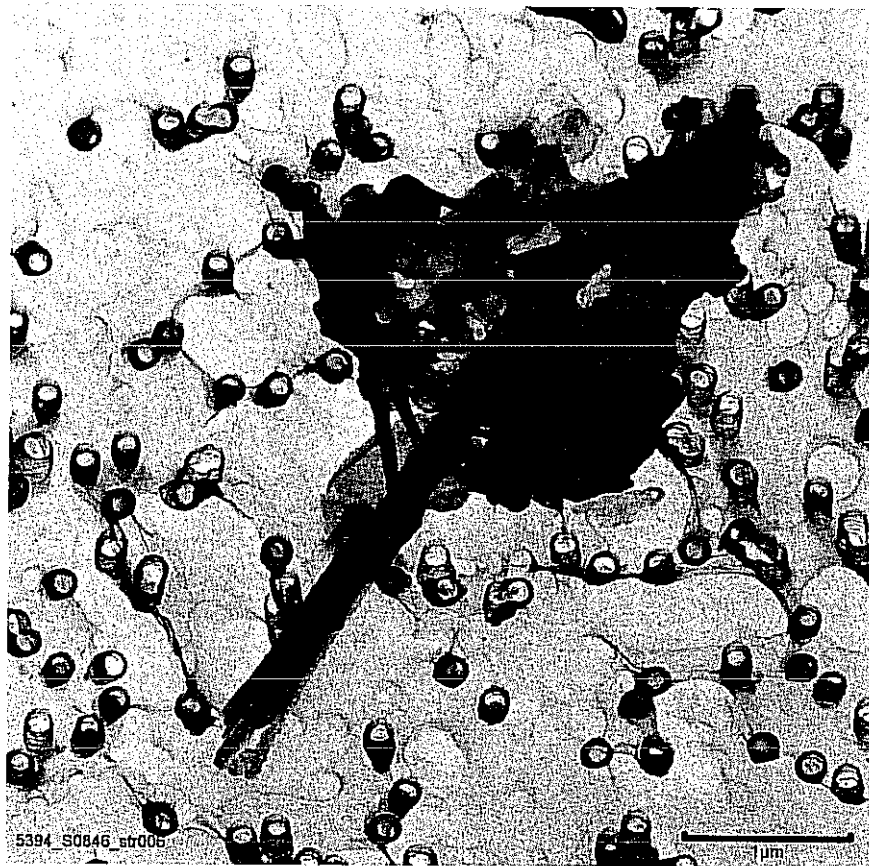




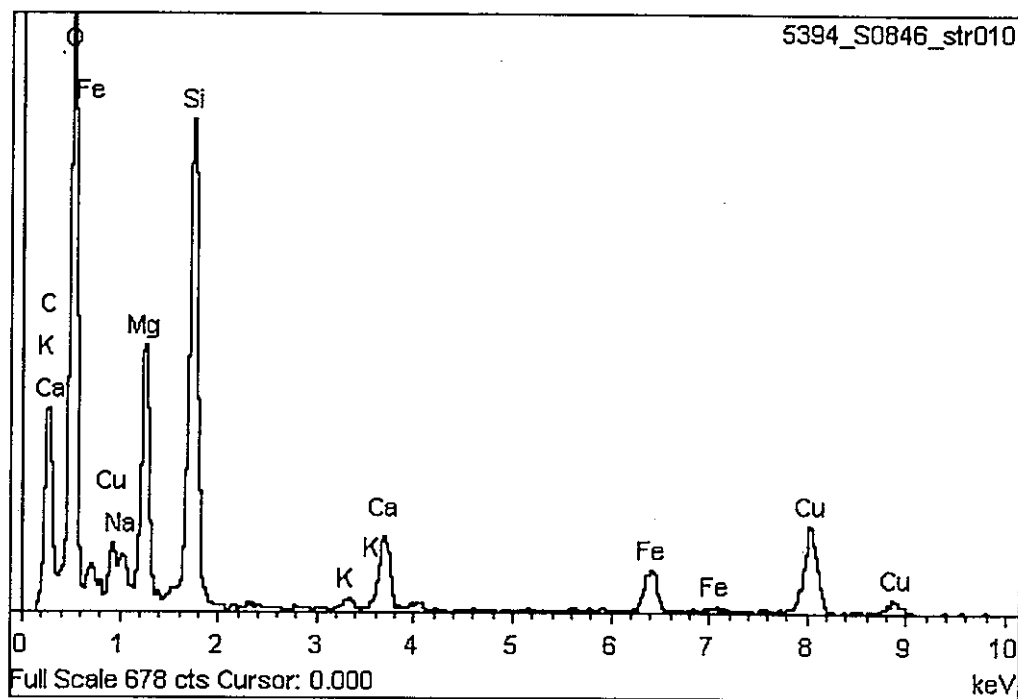
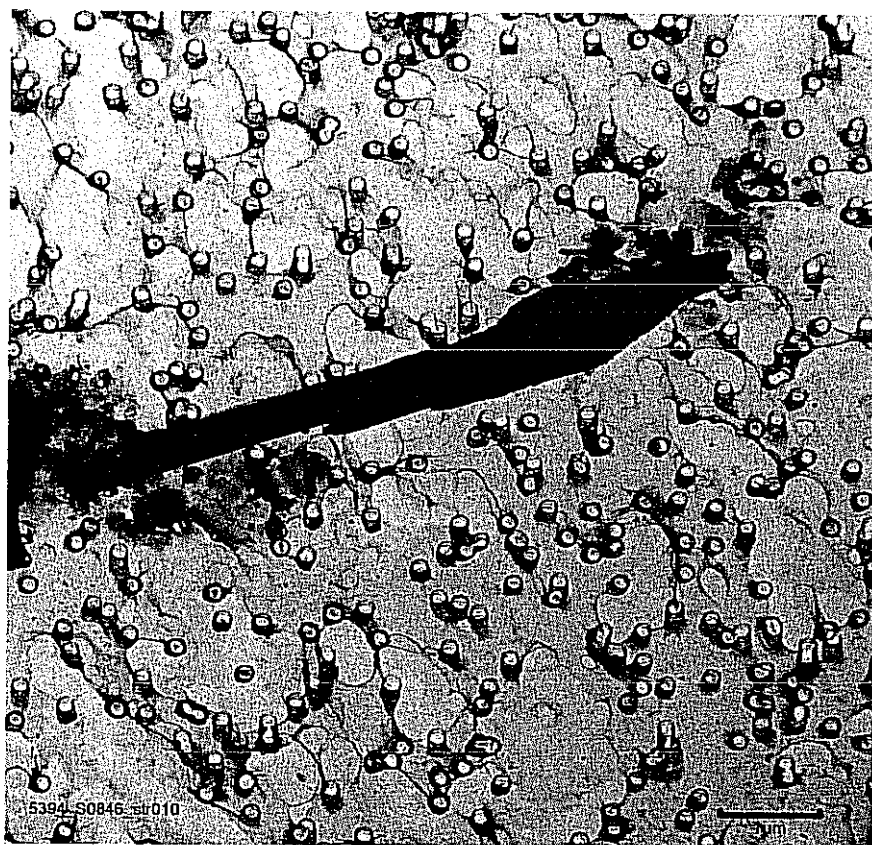


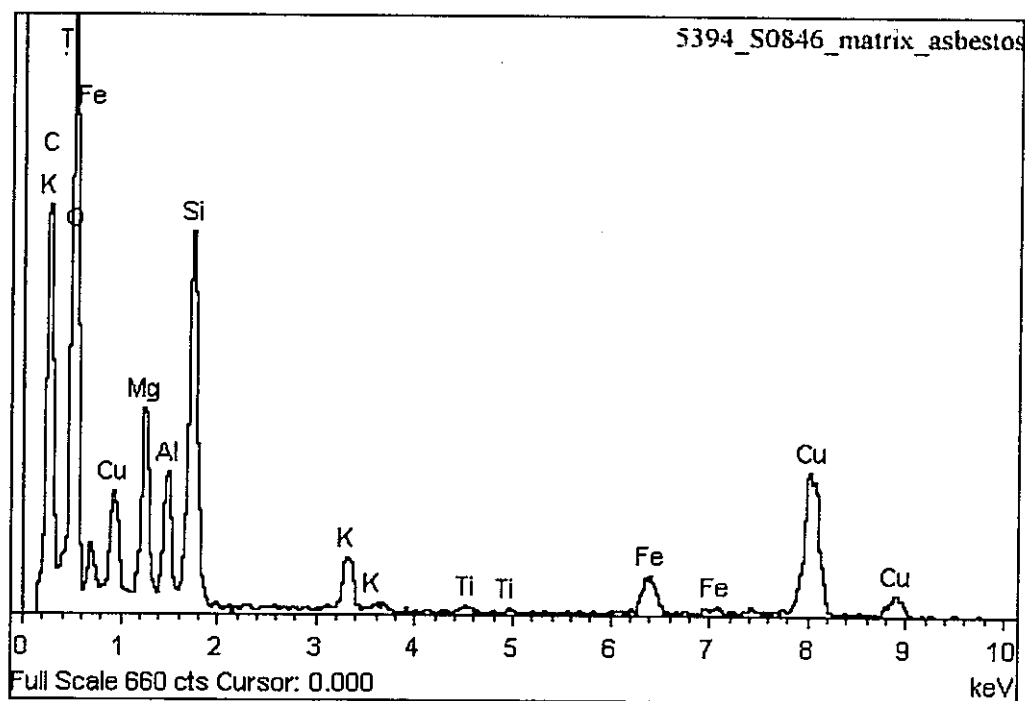
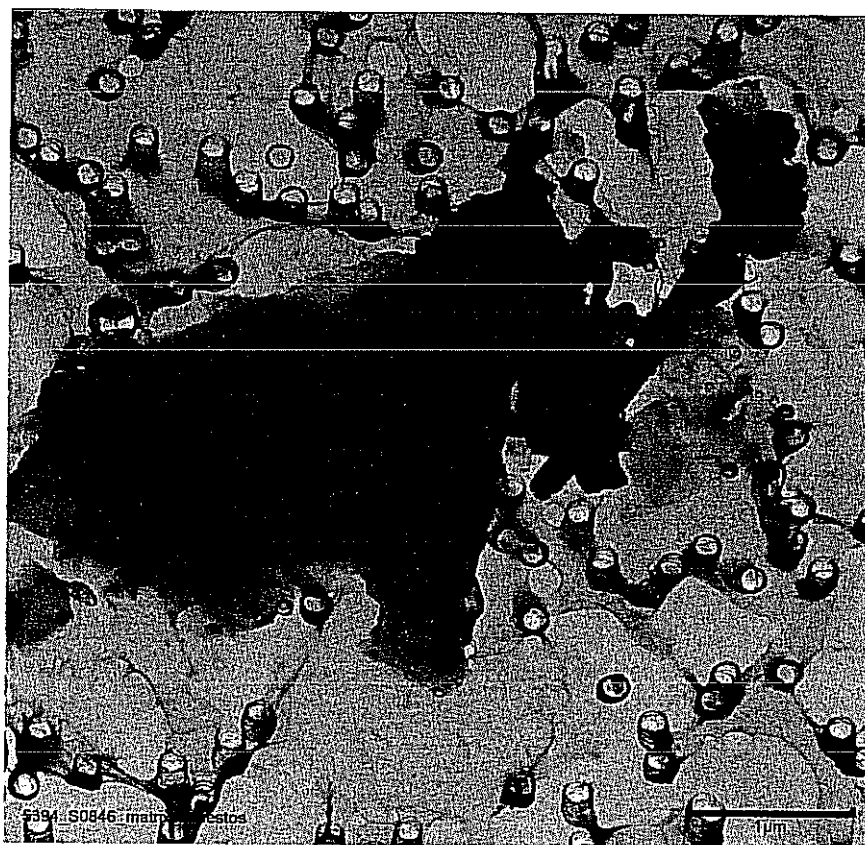












## MVA SCIENTIFIC CONSULTANTS

## Surface Dust Sample Analysis Sheet

MVA Project#	5394	Amt Collected(cm <sup>2</sup> ):	100
MVA Sample#	S0842	Amt Prepped(cm <sup>2</sup> ):	0.1
Client I.D.:	11.VA	Filter Area (mm <sup>2</sup> ):	1256
Instrument:	Philips 120	Filter Type:	PC
Magnification:	24,000	Openings Analyzed:	4
Acc. Voltage:	100	Grid Opening (mm <sup>2</sup> ):	0.009

Analyst:	WH
Date:	8/1/2007
Page:	1 of 3
Comments:	0.1 ml
ASTM Method:	D6480
	or D5755 X

Grid	Opening	Structure Number*	Structure Type	Length** (cm)	Width** (cm)	SAED	EDS	Comments	Length*** (µm)	Width*** (µm)
1	B2	1	F	22	0.1	C			9.2	0.04
		2	F	5.5	0.1	C			2.3	0.04
		3	F	2.0	0.1	C			0.8	0.04
		4	F	12.5	0.1	C			5.2	0.04
		5	M	3.0	0.15	C			1.3	0.06
		6	F	3.5	0.1	C			1.5	0.04
		7	F	16.5	0.1	C			6.9	0.04
		8	M	2.5	0.1	C			1.0	0.04
		9	F	6.5	0.1	C			2.7	0.04
		10	F	2.0	0.1	C			0.8	0.04
		11	F	2.5	0.15	C			1.0	0.06
		12	F	3.0	0.1	C			1.3	0.04
		13	F	3.6	0.1	C			1.5	0.04
		14	F	2.0	0.1	C			0.8	0.04
		15	F	6.5	0.1	C			2.7	0.04
		16	F	9.5	0.1	C			4.0	0.04
		17	C	9.0	0.1	C			3.8	0.04
		18	M	5.0	0.1	C			2.1	0.04
		19	F	4.5	0.1	C			1.9	0.04
		20	F	2.5	0.1	C			1.0	0.04
		21	B	8.0	0.5	C	C	photo	3.3	0.21
		22	C	6.0	2	C			2.5	0.83
		23	M	4.5	0.1	C			1.9	0.04
	C4	24	F	2.5	0.1	C			1.0	0.04
		25	B	5.0	0.3	C			2.1	0.13
		26	F	7.5	0.1	C			3.1	0.04
		27	F	10.0	0.1	C			4.2	0.04
		28	B	3.5	0.5	C			1.5	0.21
		29	F	3.5	0.1	C			1.5	0.04
		30	F	4.4	0.1	C			1.8	0.04
		31	F	10.5	0.1	C			4.4	0.04
		32	M	4.5	0.2	C			1.9	0.08
		33	F	4.9	9.2	C			2.0	3.83
		34	B	11.0	0.8	C			4.6	0.33
		35	F	6.0	0.1	C			2.5	0.04

\*NFD or NSD = No Fibers Detected or No Structures Detected

\*\* On Screen Measurement

\*\*\* Calculated Actual Measurement (On Screen Measurement X 10,000/Magnification)

Structure Type: B = Bundle, C = Cluster, F = Fiber, M = Matrix

SAED: C = Chrysotile, A = Amphibole

EDS: C = Chrysotile, AM = Amosite, CR = Crocidolite, AC = Actinolite, AN = Anthophyllite, TR = Tremolite, N = Non Asbestos

## MVA SCIENTIFIC CONSULTANTS

## Surface Dust Sample Analysis Sheet

MVA Project#	5394	Amt Collected(cm <sup>2</sup> ):	100
MVA Sample#	S0842	Amt Prepped(cm <sup>2</sup> ):	0.1
Client I.D.:	11.VA	Filter Area (mm <sup>2</sup> ):	1256
Instrument:	Philips 120	Filter Type:	PC
Magnification:	24,000	Openings Analyzed:	4
Acc. Voltage:	100	Grid Opening (mm <sup>2</sup> ):	0.009

Analyst:	WH
Date:	8/1/2007
Page:	2 of 3
Comments:	0.1 ml
ASTM Method:	D6480
	or D5755 X

Grid	Opening	Structure Number*	Structure Type	Length** (cm)	Width** (cm)	SAED	EDS	Comments	Length*** (µm)	Width*** (µm)
1	C4	36	F	2	0.1	C			0.8	0.04
		37	F	36.5	0.1	C			15.2	0.04
		38	F	6.0	0.1	C			2.5	0.04
		39	F	6.0	0.1	C			2.5	0.04
		40	F	8.0	0.1	C			3.3	0.04
		41	F	7.0	0.1	C			2.9	0.04
		42	F	2.8	0.1	C			1.2	0.04
	D6	43	F	30.0	0.1	C			12.5	0.04
		44	F	9.5	0.1	C			4.0	0.04
		45	F	5.0	0.1	C			2.1	0.04
		46	B	88.5	0.6	C			36.9	0.25
		47	F	10.0	0.1	C			4.2	0.04
		48	F	7.5	0.2	C			3.1	0.08
		49	B	2.5	0.4	C			1.0	0.17
		50	B	3.0	0.4	C			1.3	0.17
		51	F	5.5	0.1	C			2.3	0.04
		52	F	5.0	0.1	C			2.1	0.04
		53	M	5.5	0.1	C			2.3	0.04
		54	F	2.0	0.1	C			0.8	0.04
		55	F	5.5	0.1	C			2.3	0.04
		56	F	10.1	0.1	C			4.2	0.04
		57	F	9.5	0.1	C			4.0	0.04
		58	F	3.5	0.1	C			1.5	0.04
		59	F	0.5	0.1	C			0.2	0.04
		60	M	1.0	0.1	C			0.4	0.04
		61	B	8.0	0.3	C			3.3	0.13
		62	F	7.0	0.1	C			2.9	0.04
		63	F	5.0	0.1	C			2.1	0.04
		64	F	4.5	0.8	A	AO	amphibole "other"	1.9	0.33
	F10	65	M	2.5	0.1	C			1.0	0.04
		66	F	5.0	0.1	C			2.1	0.04
		67	F	6.0	0.1	C			2.5	0.04
		68	B	7.0	0.5	C			2.9	0.21
		69	B	5.0	0.5	C			2.1	0.21
		70	F	2.6	0.1	C			1.1	0.04

\*NFD or NSD = No Fibers Detected or No Structures Detected

\*\* On Screen Measurement

\*\*\* Calculated Actual Measurement (On Screen Measurement X 10,000/Magnification)

Structure Type: B = Bundle, C = Cluster, F = Fiber, M = Matrix

SAED: C = Chrysotile, A = Amphibole

EDS: C = Chrysotile, AM = Amosite, CR = Crocidolite, AC = Actinolite, AN = Anthophyllite, TR = Tremolite, N = Non Asbestos

MVA Project#	5394	Amt Collected(cm <sup>2</sup> ):	100
MVA Sample#	S0842	Amt Prepped(cm <sup>2</sup> ):	0.1
Client I.D.:	11.VA	Filter Area (mm <sup>2</sup> ):	1256
Instrument:	Philips 120	Filter Type:	PC
Magnification:	24,000	Openings Analyzed:	4
Acc. Voltage:	100	Grid Opening (mm <sup>2</sup> ):	0.009

or D5755      X

EDS: C = Chrysotile, AM = Amosite, CR = Crocidolite, AC = Actinolite, AN = Anthophyllite, TR = Tremolite, N = Non Asbestos

**MVA SCIENTIFIC CONSULTANTS**  
**Surface Dust Sample Analysis Sheet**

MVA Project# 5394  
MVA Sample# S0843  
Client I.D.: 12.VA  
Instrument: Philips 120  
Magnification: 24,000  
Acc. Voltage: 100

Amt Collected(cm<sup>2</sup>): 100  
Amt Prepped(cm<sup>2</sup>): 0.1  
Filter Area (mm<sup>2</sup>): 1256  
Filter Type: PC  
Openings Analyzed: 4  
Grid Opening (mm<sup>2</sup>): 0.009

Analyst: WH  
Date: 8/2/2007  
Page: 1 of 3  
Comments: 0.1 ml  
ASTM Method: D6480  
or D5755 X

Grid	Opening	Structure Number*	Structure Type	Length** (cm)	Width** (cm)	SAED	EDS	Comments	Length*** (µm)	Width*** (µm)
1	B3	1	F	15	0.1	C			6.3	0.04
		2	F	10.0	0.1	C			4.2	0.04
		3	F	7.5	0.1	C			3.1	0.04
		4	F	6.0	0.1	C			2.5	0.04
		5	F	13.2	0.1	C			5.5	0.04
		6	F	7.0	0.1	C			2.9	0.04
		7	F	3.6	0.1	C			1.5	0.04
		8	F	25.0	0.1	C			10.4	0.04
		9	C	7.5	0.4	C	C	photo	3.1	0.17
		10	F	9.5	0.1	C			4.0	0.04
		11	F	3.0	0.1	C	C	photo	1.3	0.04
		12	F	10.5	0.1	C			4.4	0.04
		13	F	20.0	0.1	C			8.3	0.04
		14	F	5.0	0.1	C			2.1	0.04
		15	M	5.0	0.1	C			2.1	0.04
		16	F	38.5	0.1	C			16.0	0.04
		17	M	6.5	0.1	C			2.7	0.04
		18	F	3.2	0.1	C			1.3	0.04
		19	F	6.5	0.1	C			2.7	0.04
		20	F	1.5	0.1	C			0.6	0.04
		21	F	2.5	0.1	C			1.0	0.04
		22	F	1.8	0.1	C			0.8	0.04
		23	F	3.5	0.1	C			1.5	0.04
		24	F	17.5	0.1	C			7.3	0.04
		25	F	4.5	0.1	C			1.9	0.04
		26	F	9.5	0.1	C			4.0	0.04
		27	F	4.0	0.1	C			1.7	0.04
		28	M	11.5	0.1	C			4.8	0.04
		29	F	11.8	0.1	C			4.9	0.04
		30	F	9.5	0.1	C			4.0	0.04
		31	F	7.5	0.1	C			3.1	0.04
	E7	32	F	10.0	0.1	C			4.2	0.04
		33	F	2.5	0.1	C			1.0	0.04
		34	F	9.0	0.1	C			3.8	0.04
		35	M	2.0	0.1	C			0.8	0.04

\*NFD or NSD = No Fibers Detected or No Structures Detected

\*\* On Screen Measurement

\*\*\* Calculated Actual Measurement (On Screen Measurement X 10,000/Magnification)

Structure Type: B = Bundle, C = Cluster, F = Fiber, M = Matrix

SAED: C = Chrysotile, A = Amphibole

EDS: C = Chrysotile, AM = Amosite, CR = Crocidolite, AC = Actinolite, AN = Anthophyllite, TR = Tremolite, N = Non Asbestos

5394report082907resources

**MVA SCIENTIFIC CONSULTANTS**  
**Surface Dust Sample Analysis Sheet**

MVA Project#	5394	Amt Collected(cm <sup>2</sup> ):	100
MVA Sample#	S0843	Amt Prepped(cm <sup>2</sup> ):	0.1
Client I.D.:	12.VA	Filter Area (mm <sup>2</sup> ):	1256
Instrument:	Philips 120	Filter Type:	PC
Magnification:	24,000	Openings Analyzed:	4
Acc. Voltage:	100	Grid Opening (mm <sup>2</sup> ):	0.009

Analyst:	WH
Date:	8/2/2007
Page:	2 of 3
Comments:	0.1 ml
ASTM Method:	D6480
	or D5755 X

Grid	Opening	Structure Number*	Structure Type	Length** (cm)	Width** (cm)	SAED	EDS	Comments	Length*** (µm)	Width*** (µm)
1	E7	36	B	6.5	0.3	C			2.7	0.13
		37	F	1.5	0.1	C			0.6	0.04
		38	F	7.5	0.1	C			3.1	0.04
		39	F	37.0	0.1	C			15.4	0.04
		40	F	3.0	0.1	C			1.3	0.04
		41	F	4.0	0.1	C			1.7	0.04
		42	F	2.6	0.1	C			1.1	0.04
		43	M	3.5	0.1	C			1.5	0.04
		44	F	4.5	0.1	C			1.9	0.04
	G4	45	F	5.0	0.1	C			2.1	0.04
		46	F	12.5	0.1	C			5.2	0.04
		47	F	17.5	0.1	C			7.3	0.04
		48	M	6.5	0.5	C			2.7	0.21
		49	F	10.1	0.1	C			4.2	0.04
		50	C	10.5	5.5	C			4.4	2.29
		51	F	10.1	0.1	C			4.2	0.04
		52	F	2.0	0.1	C			0.8	0.04
		53	F	15.0	0.1	C			6.3	0.04
		54	F	8.5	0.1	C			3.5	0.04
		55	F	7.5	0.1	C			3.1	0.04
		56	F	3.5	0.1	C			1.5	0.04
		57	F	8.0	0.1	C			3.3	0.04
		58	F	16.5	0.1	C			6.9	0.04
		59	F	5.0	0.1	C			2.1	0.04
		60	F	3.5	0.1	C			1.5	0.04
		61	F	3.5	0.1	C			1.5	0.04
		62	F	16.0	0.1	C			6.7	0.04
		63	F	2.8	0.1	C			1.2	0.04
		64	F	10.0	0.1	C			4.2	0.04
		65	F	8.5	0.1	C			3.5	0.04
	I3	66	F	3.5	0.1	C			1.5	0.04
		67	F	4.0	0.1	C			1.7	0.04
		68	B	7.0	0.4	C			2.9	0.17
		69	M	10.0	0.1	C			4.2	0.04
		70	F	5.0	0.1	C			2.1	0.04

\*NFD or NSD = No Fibers Detected or No Structures Detected

\*\* On Screen Measurement

\*\*\* Calculated Actual Measurement (On Screen Measurement X 10,000/Magnification)

Structure Type: B = Bundle, C = Cluster, F = Fiber, M = Matrix

SAED: C = Chrysotile, A = Amphibole

EDS: C = Chrysotile, AM = Amosite, CR = Crocidolite, AC = Actinolite, AN = Anthophyllite, TR = Tremolite, N = Non Asbestos

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Analyst: WH  
Date: 8/2/2007  
Page: 3 of 3  
Comments: 0.1 ml  
ASTM Method: D6480  
or D5755 X

[illegible]

\*NFD or NSD = No Fibers Detected or No Structures Detected

**\*\* On Screen Measurement**

\*\*\* Calculated Actual Measurement (On Screen Measurement X 10,000/Magnification)

Structure Type: B = Bundle, C = Cluster, F = Fiber, M = Matrix

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## MVA SCIENTIFIC CONSULTANTS

## Surface Dust Sample Analysis Sheet

MVA Project# 5394 Amt Collected(cm<sup>2</sup>): 100  
MVA Sample# S0844 Amt Prepped(cm<sup>2</sup>): 0.01  
Client I.D.: 13.VA Filter Area (mm<sup>2</sup>): 1256  
Instrument: Philips 120 Filter Type: PC  
Magnification: 24,000 Openings Analyzed: 6  
Acc. Voltage: 100 Grid Opening (mm<sup>2</sup>): 0.009

Analyst: WH  
Date: 8/6/2007  
Page: 1 of 2  
Comments: 0.01 ml  
ASTM Method: D6480  
or D5755 X

Grid	Opening	Structure Number*	Structure Type	Length** (cm)	Width** (cm)	SAED	EDS	Comments	Length*** (μm)	Width*** (μm)
1	B2	1	B	2.5	0.4	C			1.0	0.17
		2	F	24.5	0.1	C			10.2	0.04
		3	B	3.5	0.2	C			1.5	0.08
		4	F	29.5	0.1	C			12.3	0.04
		5	F	5.0	0.1	C			2.1	0.04
		6	F	12.0	0.1	C			5.0	0.04
	C5	7	F	6.0	0.1	C			2.5	0.04
		8	F	4.0	0.1	C			1.7	0.04
		9	B	9.5	0.4	C		photo EDS contains "K"	4.0	0.17
		10	F	3.0	0.1	C			1.3	0.04
		11	F	3.5	0.1	C			1.5	0.04
		12	F	4.0	0.1	C			1.7	0.04
	D7	13	F	4.0	0.1	C			1.7	0.04
		14	B	8.5	0.3	C	C	photo EDS contains "K"	3.5	0.13
		15	F	16.0	0.1	C			6.7	0.04
		16	F	7.0	0.1	C			2.9	0.04
		17	F	4.5	0.1	C			1.9	0.04
		18	F	15.5	0.1	C			6.5	0.04
		19	F	6.0	0.1	C			2.5	0.04
		20	F	11.0	0.1	C			4.6	0.04
		21	F	5.4	0.2	C			2.3	0.08
	E9	22	F	3.5	0.1	C			1.5	0.04
		23	F	46.0	0.1	C			19.2	0.04
		24	F	5.0	0.1	C			2.1	0.04
		25	F	16.5	0.1	C			6.9	0.04
		26	F	16.5	0.1	C			6.9	0.04
		27	F	14.5	0.1	C			6.0	0.04
		28	F	3.0	0.2	C			1.3	0.08
	F4	29	F	16.5	0.1	C			6.9	0.04
		30	F	23.0	0.1	C			9.6	0.04
		31	B	10.0	0.9	C			4.2	0.38
		32	F	6.5	0.1	C			2.7	0.04
		33	B	9.0	0.25	C			3.8	0.10
		34	F	21.0	0.1	C			8.8	0.04
		35	F	2.0	0.1	C			0.8	0.04

\*NFD or NSD = No Fibers Detected or No Structures Detected

\*\* On Screen Measurement

\*\*\* Calculated Actual Measurement (On Screen Measurement X 10,000/Magnification)

Structure Type: B = Bundle, C = Cluster, F = Fiber, M = Matrix

SAED: C = Chrysotile, A = Amphibole

EDS: C = Chrysotile, AM = Amosite, CR = Crocidolite, AC = Actinolite, AN = Anthophyllite, TR = Tremolite, N = Non Asbestos

Amt Collected(cm<sup>2</sup>): 100

or D5755      X

\*NFD or NSD = No Fibers Detected or No Structures Detected

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## MVA SCIENTIFIC CONSULTANTS

## Surface Dust Sample Analysis Sheet

MVA Project# 5394 Amt Collected(cm<sup>2</sup>): 100  
MVA Sample# S0845 Amt Prepped(cm<sup>2</sup>): 0.01  
Client I.D.: 14.VA Filter Area (mm<sup>2</sup>): 1256  
Instrument: Philips 120 Filter Type: PC  
Magnification: 24,000 Openings Analyzed: 6  
Acc. Voltage: 100 Grid Opening (mm<sup>2</sup>): 0.009

Analyst: WH

Date: 8/6/2007

Page: 1 of 2

Comments: 0.01 ml

ASTM Method: D6480

or D5755 X

Grid	Opening	Structure Number*	Structure Type	Length** (cm)	Width** (cm)	SAED	EDS	Comments	Length*** (µm)	Width*** (µm)
1	B1	1	F	8	0.1	C			3.3	0.04
		2	F	2.0	0.1	C			0.8	0.04
		3	F	9.5	0.1	C			4.0	0.04
		4	F	5.0	0.1	C			2.1	0.04
		5	F	6.5	0.1	C			2.7	0.04
		6	F	61.0	0.1	C			25.4	0.04
		7	F	5.0	0.1	C			2.1	0.04
		8	F	8.0	0.1	C			3.3	0.04
		9	B	10.5	0.8	C	C	photo	4.4	0.33
		10	F	6.5	0.1	C			2.7	0.04
		11	F	5.0	0.15	C			2.1	0.06
		12	F	3.1	0.1	C			1.3	0.04
	C3	13	F	5.0	0.1	C			2.1	0.04
		14	B	8.0	0.6	C			3.3	0.25
		15	F	10.0	0.1	C			4.2	0.04
		16	F	15.5	0.15	C			6.5	0.06
	D5	17	F	3.5	0.1	C			1.5	0.04
		18	F	5.0	0.1	C			2.1	0.04
		19	F	5.5	0.1	C			2.3	0.04
		20	F	2.5	0.1	C			1.0	0.04
		21	F	3.0	0.1	C			1.3	0.04
		22	B	11.0	0.5	C			4.6	0.21
		23	F	4.5	0.1	C			1.9	0.04
		24	F	16.0	0.1	C			6.7	0.04
		25	F	3.2	0.1	C			1.3	0.04
		26	F	6.5	0.1	C			2.7	0.04
		27	B	2.5	0.25	C			1.0	0.10
		28	F	11.5	0.2	C			4.8	0.08
		29	F	7.0	0.1	C			2.9	0.04
		30	F	11.5	0.1	C			4.8	0.04
		31	F	3.0	0.1	C			1.3	0.04
	E4	32	F	10.5	0.1	C			4.4	0.04
		33	B	18.5	0.3	C			7.7	0.13
		34	F	46.5	0.1	C			19.4	0.04
		35	F	4.0	0.1	C			1.7	0.04

\*NFD or NSD = No Fibers Detected or No Structures Detected

\*\* On Screen Measurement

\*\*\* Calculated Actual Measurement (On Screen Measurement X 10,000/Magnification)

Structure Type: B = Bundle, C = Cluster, F = Fiber, M = Matrix

SAED: C = Chrysotile, A = Amphibole

EDS: C = Chrysotile, AM = Amosite, CR = Crocidolite, AC = Actinolite, AN = Anthophyllite, TR = Tremolite, N = Non Asbestos

MVA Project#	5394	Amt Collected(cm <sup>2</sup> ):	100
MVA Sample#	S0845	Amt Prepped(cm <sup>2</sup> ):	0.01
Client I.D.:	14.VA	Filter Area (mm <sup>2</sup> ):	1256
Instrument:	Philips 120	Filter Type:	PC
Magnification:	24,000	Openings Analyzed:	6
Acc. Voltage:	100	Grid Opening (mm <sup>2</sup> ):	0.009

or D5755

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